

Section 1926.911 Misfires:

- *(a) If a misfire is found, the Blaster-in-Charge shall invoke sufficient safeguards to exclude all employees from the potential blast area.
- *(b) No work shall be done except that necessary to remove the hazard of the misfire. Only those employees necessary to do the work shall enter the potential blast area. Only the Blaster-in-Charge, and the absolute minimum number of competent, personnel (as defined in 29 CFR 1926 Subparts L and P), necessary to assess the situation shall approach the hole to inspect the misfire.
- *(c) The Blaster-in-Charge shall determine the safest steps for removing the hazard of the misfire. During development and implementation of these steps, the Blaster-in-Charge shall comply with the manufacturer's recommendations. Further, the guidelines of the Safety in the Transportation, Storage, Handling and Use of Explosive Materials, IME Safety Library Publication No. 17, which is incorporated herein by reference, including any subsequent amendments and editions, shall be utilized.
- *(d) If there are any misfires while using safety fuse and blasting cap, all employees shall remain out of the potential blast area for at least 30 minutes. If electric detonators, shock tube, gas tube or detonating cord systems or materials were used and a misfire occurred, the waiting period may be reduced to 15 minutes. In either case, the Blaster-in-Charge shall assess the circumstances and invoke a safe waiting period before allowing any personnel to enter the potential blast area. All lines shall be carefully traced and a search made for unexploded charges.
- *(e) No drilling, digging, or picking shall be permitted until all misfires have been detonated or the Blaster-in-Charge approves the work.

Section 1926.912 Underwater blasting:

- *(a) In underwater blasting, no shot shall be fired without the approval of the Blaster-in-Charge.
- (b) Loading tubes and casings of dissimilar metals shall not be used because of possible electric transient currents from galvanic action of the metals and water.
- *(c) Only water-resistant detonators and detonating cords shall be used for all marine blasting. Loading shall be done through a nonsparking loading tube when tube is necessary.
- *(d) No blast shall be fired while any vessel under way is closer than 1,500 feet to the blast site. Those on board vessels or craft moored or anchored within 1,500 feet shall be notified before a blast is fired. Note: The warning signals and personnel safety provisions of §1926.909 also apply.
- (e) No blast shall be fired while any swimming or diving operations are in progress in the vicinity of the blasting area. If such operations are in progress, signals and arrangements shall be agreed upon to assure that no blast shall be fired while any person is in the water.
- (f) Blasting flags shall be displayed.
- *(g) The storage and handling of explosives aboard vessels used in underwater blasting operations shall be in accordance with the provisions of this Standard on handling and storing explosives.
- *(h) Prior to firing the blast, the blaster shall determine the method(s) that will be used for detecting misfires and take preparatory steps (e.g., noting obvious indications of misfire, attaching float(s) that will be released by the firing, staging underwater cameras, or other appropriate means). Misfires shall be handled in accordance with the requirements of §1926.911.

Section 1926.913 Blasting in excavation work under compressed air:

- (a) Detonators and explosives shall not be stored or kept in tunnels, shafts, or caissons. Detonators and explosives for each round shall be taken directly from the magazines to the blasting zone and immediately loaded. Detonators and explosives left over after loading a round shall be removed from the working chamber before the connecting wires are connected up.
- *(b) When detonators or explosives are brought into an air lock, the only employees who shall be permitted to enter the airlock are the powderman, blaster, lock tender and the employees necessary for carrying the detonators or explosives. No other material, supplies, or equipment shall be locked through with the explosives.